03050205-060

(Edisto River and South Edisto River)

General Description

Watershed 03050205-060 is located in Colleton, Dorchester, and Charleston Counties and consists primarily of the *Edisto River* and the *South Edisto River* and their tributaries from Four Hole Swamp to the Atlantic Ocean. The watershed occupies 154,919 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. The predominant soil types consist of an association of the Bohicket-Chipley-Rains-Chisolm-Yauhannah series. The erodibility of the soil (K) averages 0.15; the slope of the terrain averages 1%, with a range of 0-6%. Land use/land cover in the watershed includes: 0.88% urban land, 3.81% agricultural land, 3.58% scrub/shrub land, 0.13% barren land, 65.24% forested land, 8.23% forested wetland (swamp), 10.21% nonforested wetland (marsh), and 7.92% water.

This lowest reach of the Edisto River receives the drainage from the upper reaches of the Edisto River and Four Hole Swamp. The Dawho River (03050205-070) enters the Edisto River and forms the South Edisto River, which drains into the Atlantic Ocean. There are a total of 102.9 stream miles and 13.6 square miles of estuarine areas in this watershed. The Edisto River is classified FW from its origin downstream to its intersection with U.S. Highway 17, and below this point to its confluence with the Dawho River, the river is classified ORW. Cold Water Branch, Deep Creek (Maple Cane Swamp, Horse Pen Branch), and Sandy Run (Big Bay Swamp, Craven Branch, Boston Branch) drain into the Edisto River at the top of the watershed. Further downstream near the Town of Jacksonboro, the Edisto River accepts drainage from Spooler Swamp, Bull Bridge Creek, Allen Meadow, Penny Creek (Adams Run), Horse Creek, and Ashe Creek.

The South Edisto River is classified ORW from its headwaters to Mud Creek, and below Mud Creek to the Atlantic Ocean the river is classified SFH. Mosquito Creek, Sampson Island Creek, and Alligator Creek are all classified ORW and drain into the upper portion of the South Edisto River. Mosquito Creek connects to the Ashepoo River (Savannah-Salkehatchie Basin) through Bull Cut, and the upper South Edisto River connects to watershed 03050205-070 through the Dawho River and Watts Cut (SFH). Further downstream, St. Pierre Creek accepts drainage from Bailey Creek, Shingle Creek (Milton Creek), Store Creek, and Fishing Creek (Sandy Creek) before draining into the South Edisto River. Big Bay Creek (SFH) enters downstream from Fishing Creek and accepts drainage from Mud Creek (ORW) and Scott Creek (ORW) near The Mound. Scott Creek also drains into the Atlantic Ocean via Jeremy Inlet (SFH).

There are several additional natural resource areas in the watershed including Givhans Ferry State Park near the top of the watershed, and Edisto Beach State Park at the base of the watershed. There are also numerous ponds and lakes (18-400 acres) owned privately and by the State (S.C. State Forestry Commission) for recreation and wildlife purposes.

Water Quality

Station #	Type	Class	Description
E-015	P	FW	EDISTO RIVER AT SC 61 AT GIVHANS FERRY STATE PARK
MD-119	P	FW/ORW	EDISTO RIVER AT US 17, 12.5 MI NW RAVENEL
MD-244	W	SFH	SOUTH EDISTO RIVER BELOW ST. PIERRE CREEK

***Edisto River* - There are two monitoring sites along this section of the Edisto River. At the upstream site (E-015) aquatic life uses are not supported due to occurrences of copper in excess of the aquatic life acute standards. In addition, there is a significant decreasing trend in pH and significant increasing trends in turbidity and total suspended solids. The phthalate ester, di-n-butylphthalate, was detected in the 1994 and 1996 sediment samples. At the downstream site (MD-119), aquatic life uses are fully supported, but there**

is a significant decreasing trend in pH and a significant increasing trend in turbidity. A very high concentration of lead was measured in the 1997 sediment sample, and P,P'DDT, P,P'DDD, and P,P'DDE were detected in the 1994 sample. Although the use of DDT was banned in 1973, it is very persistent in the environment. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus and total nitrogen concentrations suggest improving conditions at both sites for these parameters. Recreational uses are fully supported at both sites, but there is a significantly increasing trend in fecal coliform bacteria concentration.

***South Edisto River (MD-244)* - Aquatic life and recreational uses are fully supported.**

A fish consumption advisory has been issued by the Department for mercury and includes the freshwater portions of streams within this watershed (see advisory p.31).

Permitted Activities

Point Source Contributions

RECEIVING STREAM	***NPDES#***
FACILITY NAME	***TYPE***
PERMITTED FLOW @ PIPE (MGD)	***LIMITATION***
COMMENT	
SANDY RUN	**SC0041971**
FOSTER DIXIANA/SANDY RUN MINE	**MINOR INDUSTRIAL**
PIPE #: 001 FLOW: M/R	**EFFLUENT**
LAND APPLICATION	***PERMIT #***
FACILITY NAME	***TYPE***
SPRAY IRRIGATION	**ND0063789**
TOWN OF EDISTO BEACH/FAIRFIELD	**MINOR MUNICIPAL**
SPRAY IRRIGATION	**ND0071510**
JEREMY CAY	**MINOR COMMUNITY**

Camp Facilities

FACILITY NAME/TYPE	***PERMIT #***
RECEIVING STREAM	***STATUS***
GIVHANS FERRY STATE PARK/FAMILY	**18-307-1051**
EDISTO RIVER	**ACTIVE**

Mining Activities

MINING COMPANY	***PERMIT #***
MINE NAME	***MINERAL***
BECKER MATERIALS, INC.	**0755-15**
SANDY RUN MINE	**SAND**
BANKS CONSTRUCTION	**1076-18**
SANDPIT ROAD MINE	**SAND**
BOHICKET CONSTRUCTION CO., INC.	**1090-08**

EDINGSVILLE ONE		**SAND/CLAY**
PALMETTO SAND COMPANY		**0620-18**
HARTZ BLUFF MINE		**SAND**
AMERICAN PEAT & ORGANICS, INC.		**0173-15**
TI-TI MINE		**PEAT**

Water Supply

WATER USER (TYPE)		***REGULATED CAPACITY (MGD)***
WATERBODY		***PUMPING CAPACITY (GPM)***
WESTVACO CORP./KRAFT DIV.(I)	**36.288**	
EDISTO RIVER		**15,000**
CITY OF CHARLESTON (M)		***********
EDISTO RIVER		***********

Growth Potential

A high growth potential is projected for the upper portion of the watershed surrounding the Cottageville area. The Cottageville growth along U.S. Highway 17A to Charleston is one of the fastest growing areas in the state. There is a low to moderate growth potential for the lower portion of the watershed, primarily in the unincorporated areas centered around the Town of Edisto Beach. Much of the growth is tourism-based and thus elicits primarily seasonal influence on the area. Only a small proportion of the town is sewered and there are no plans to expand the sewer service area. However, the Town of Edisto Beach will extend sewer lines to serve areas where septic systems have failed (at owner expense). The ORW classification of most of the waters in this watershed prohibits new point source discharges of wastewater to surface waters. Growth that occurs will have to rely primarily on septic tanks and/or land application systems.